

Ultipor N66 filter cartridges are specifically engineered for microbial stabilization of food and beverage products.

## Description

Ultipor N66 filters incorporate pleated nylon 6,6 media into single open ended (SOE) cartridges to fit in sanitary filter housings. These elements provide reliable, economical and efficient microbial stabilization for a broad range of food and beverage applications.

Ultipor N66 filters are suitable for exposure to repeated hot water and *in situ* steam sanitization cycles for longer service life.

## Features and Benefits

| Features   | Benefits   |
|--|--|
| Hydrophilic media in multiple microbial retention ratings                                      | <ul style="list-style-type: none"> <li>• Consistent filtrate quality</li> <li>• Targeted microbial stabilization of beverages and ingredients</li> <li>• Easy to wet and integrity test</li> </ul> |
| Cartridges resistant to numerous sanitization cycles produced with no adhesives or surfactants | <ul style="list-style-type: none"> <li>• Process reliability</li> <li>• Cost effective filtration</li> </ul>   |
| Individually serialized cartridges   | <ul style="list-style-type: none"> <li>• Full traceability</li> </ul>  |

## Quality

- Cartridges produced in a controlled environment
- Manufactured according to ISO 9001:2008 certified Quality Management System

## Food Contact Compliance

Please refer to the Pall website <http://www.pall.com/foodandbev> for a Declaration of Compliance to specific National Legislation and/or Regional Regulatory requirements for food contact use.

## Ultipor® N66 Filter Cartridges For Microbial Reduction and Retention



Ultipor N66 filter cartridges with nylon and polyester hardware

## Typical Applications

| Grades        | Applications   |
|---------------|--|
| NF, NL and NA | Filtration of aqueous fluids (e.g. bottled water or ingredient solutions)                              |
| NB and NK     | Filtration of bulk alcoholic fluids (e.g. wine and beer) or aqueous fluids (e.g. ingredient solutions) |

## Materials of Construction

|                      |   |
|----------------------|---|
| Filter Medium        | Nylon with integral polyester non-woven substrate |
| Support and Drainage | Polyester   |
| Cage, Core           | Polypropylene                                     |
| O-ring Seal          | Ethylene Propylene Rubber or Silicone Elastomer   |

### For Part Numbers beginning with AB\_

|                     |           |
|---------------------|-----------|
| End Cap and Fin End | Polyester |
| Adaptor             | Polyester |

### For Part Numbers beginning with ABN\_

|                     |   |
|---------------------|---|
| End Cap and Fin End | Unpigmented Nylon 6-10  |
| Adaptor             | Unpigmented Nylon 6-10 with internal stainless steel reinforcing ring |

## Technical Information

### Operating Characteristics in Compatible Fluids<sup>1</sup>

| For Part Numbers beginning with ABN_     |                       |
|--|-----------------------|
| Maximum continuous operating temperature | 80 °C (176 °F)        |
| Maximum Differential Pressure (forward)  | Operating Temperature |
| 5.4 bard (80 psid)                       | 50 °C (122 °F)        |
| 4.0 bard (60 psid)                       | 80 °C (176 °F)        |
| 2.1 bard (30 psid)                       | 90 °C (194 °F)        |
| 300 mbard (4.4 psid)                     | 140 °C (284 °F)       |
| For Part Numbers beginning with AB_      |                       |
| Maximum continuous operating temperature | 60 °C (140 °F)        |
| Maximum Differential Pressure (forward)  | Operating Temperature |
| 5.4 bard (80 psid)                       | 50 °C (122 °F)        |
| 4.0 bard (60 psid)                       | 80 °C (176 °F)        |
| 300 mbard (4.4 psid)                     | 140 °C (284 °F)       |

<sup>1</sup> Compatible fluids are defined as those which do not swell, soften or attack any of the filter components.

### Sterilization and Sanitization

| For Part Numbers beginning with ABN_ |                           |                              |
|--------------------------------------|---------------------------|------------------------------|
| Method                               | Temperature               | Cumulative Time <sup>2</sup> |
| Hot water                            | 80 - 85 °C (176 - 185 °F) | 100 hours                    |
| Steam                                | 110 °C (230 °F)           | 50 hours*                    |
| Steam                                | 125 °C (257 °F)           | 16 hours*                    |
| Steam                                | 140 °C (284 °F)           | 4 hours*                     |
| For Part Numbers beginning with AB_  |                           |                              |
| Method                               | Temperature               | Cumulative Time              |
| Steam                                | 125 °C (257 °F)           | 16 hours*                    |
| Steam                                | 140 °C (284 °F)           | 4 hours*                     |

<sup>2</sup> Measured under laboratory test conditions. The actual cumulative time depends on the process conditions. For applications requiring Sterilization or Sanitization Pall recommends the use of Code 7 adaptors to ensure filter sealing after cooling. Cartridges should be cooled to system operating temperature prior to use. Contact Pall for recommended procedures.

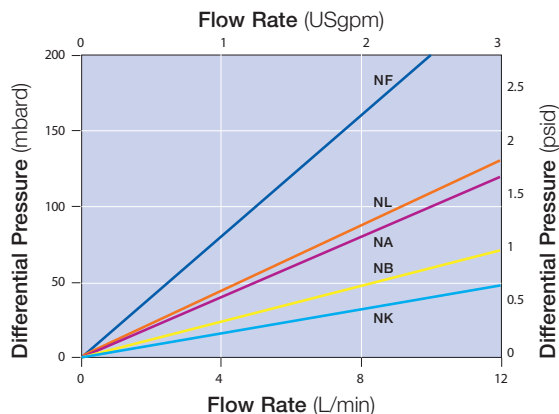
\* Where indicated one hour sanitization cycles were utilized.

### Microbial Removal Rating in Liquid

The NF grade (2 media layers) provides a sterile effluent when challenged with *Brevundimonas diminuta* (ATCC19146) at a level of >10<sup>7</sup> CFU per cm<sup>2</sup> of effective filtration area. Microbial reduction data for specific applications may be available for other media grades, please contact your Pall representative for application specific information.

NA, NF and NL grades are recommended for filtration of water and aqueous fluids. NB and NK grades are recommended for filtration of bulk alcoholic beverages like wine and beer. All grades may be suitable for liquid ingredient filtration. Please contact Pall for assembly sizing based on your specific application.

### Typical Flow Rates<sup>3</sup>



<sup>3</sup> Typical initial clean media differential pressure ( $\Delta P$ ) per 250 mm (10") cartridge for water at 20 °C (68 °F); viscosity 1 centipoise. For 508 mm, 762 mm and 1016 mm configurations divide the differential pressure by 2, 3, and 4 respectively.

### Ordering Information

This information is a guide to the part number structure and possible options. For availability of specific options and housing details, please contact Pall.

Part Number: AB  Table 1  Table 2  Table 3  Table 4  W  Table 6

AB N  Table 2  Table 3  7  Table 5  W  Table 6

Table 1 : Hardware Material

| Code  | Description            |
|-------|------------------------|
| N*    | Unpigmented Nylon 6-10 |
| Blank | Polyester              |

\* Available only in Code 7 (Table 4)

Table 2 : Nominal Length

| Code | Length        |
|------|---------------|
| 1    | 254 mm (10")  |
| 2    | 508 mm (20")  |
| 3    | 762 mm (30")  |
| 4    | 1016 mm (40") |

Table 3 : Microbial Removal Rating

| Code | Microbial removal rating ( $\mu\text{m}$ ) in Liquids | Membrane Layers |
|------|---|-----------------|
| NA   | 0.2   | 1               |
| NF   | 0.2   | 2               |
| NB   | 0.45  | 1               |
| NL   | 0.45  | 2               |
| NK   | 0.65  | 1               |

Table 4 : Adaptor

| Code | Description  |
|------|--|
| 3    | SOE – single open end with flat closed end and external 222 O-rings, in polyester only         |
| 7    | SOE – single open end with fin end, 2 locking tabs and external 226 O-rings                    |
| 8    | SOE – single open end with fin end and external 222 O-rings, in polyester only                 |
| 28   | SOE – single open end with fin end, 3 locking tabs and external 222 O-rings, in polyester only |

(Code 3, 7, 8 and 28 may be available in selected grades, confirm code availability with your Pall representative)

Table 5 : Application

| Code  | Description                |
|-------|----------------------------|
| B*    | For beer applications      |
| Blank | For all other applications |

\* Available in NB and NK only

Table 6 : O-ring Seal

| Code | Description               |
|------|---------------------------|
| H4   | Silicone Elastomer        |
| J    | Ethylene Propylene Rubber |



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